IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application:	:	Group Art Unit: 2116
Vyacheslav Barsuk	:	Examiner: Michael J. Brown
Serial No.: 10/736,429	:	IBM Corporation
Filed: 12/15/2003	:	Intellectual Property Law
Title: METHOD, APPARATUS & PROGRAM	:	Department IQ0A/040-3
STORAGE DEVICE FOR PROVIDING	:	1701 North Street
A REMOTE POWER RESET AT A	:	Endicott, NY 13760
REMOTE SERVER THROUGH A	:	
NETWORK CONNECTION	:	

Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

In response to the nonFinal Action mailed on July 9, 2007, Appellant **Maintains the Appeal** under 37 CFR 41.39(b)(2), and submits a Reply Brief as specified in 37 CFR 41.41.

REPLY BRIEF

I. Real Party in Interest

The real party in interest is International Business Machines Corporation, a corporation of New York, with a place of business at Armonk, NY 10504.

II. Related Appeals and Interferences

There are no related appeals or interferences or other judicial proceedings.

III. Status of Claims

Claims 1-7, 10-15, 18 and 21 are pending, Finally Rejected and Appealed.

Dependent claim 8 is pending and was found to be allowable if rewritten in independent form, including all the limitations of the base claim and any intervening claims.

Claims 9, 16-17, 19-20 and 22 have been Canceled.

IV. Status of Amendments

On November 22, 2006, after Final Rejection, Appellant filed an Amendment under Rule 116 which was not entered because of lack of clarity as to which claims were canceled. On January 17, 2007, Appellant filed another Amendment under Rule 116 which clearly indicated which claims were canceled, and this Amendment under Rule 116 was entered.

On June 26, before Final Action, Appellant filed a Rule 131 Affidavit including original source code and an original directory to swear behind US 2004/0267918 to Guarraci et al. The Examiner entered this Rule 131 Affidavit, but could not understand the source code and therefore, stated that it was not effective to swear behind Guarraci et al. On November 22, 2006, after Final Rejection, Appellant filed a Supplemented Rule 131 Affidavit to swear behind Guarraci et al. The Supplemental Rule 131 Affidavit included the original source code and the original directory as previously filed by Appellants on June 26, 2006 before Final Rejection. The Supplemental Rule 131 Affidavit also included newly created explanatory comments prepared by the Inventor at approximately the time of filing the Supplemental Rule 131 Affidavit to assist the Examiner in understanding the source code. The Examiner did not enter Appellant's Supplemental Rule 131 Affidavit because the Examiner could not readily differentiate between the newly created explanatory comments to the source code, and the original source code, although Appellant believes that he furnished the explanatory comments in a distinguishing blue color. Also, the Examiner could have compared the original Rule 131 Affidavit (which did not include the explanatory comments) to the Supplemental Rule 131 Affidavit (which included the explanatory comments) to identify the newly created explanatory comments. The Examiner also

did not enter the Supplemental Rule 131 Affidavit because the Examiner thought it was not seasonably presented under MPEP 715.09, even though the operative part of the Supplemental Rule 131 Affidavit was submitted before Final Rejection in the original Rule 131 Affidavit.

On January 15, 2007, Appellant resubmitted the same Supplemental Rule 131 Affidavit as previously filed on November 22, 2006, but the Examiner again refused to enter the Supplemental Rule 131 Affidavit, despite Appellant's arguments that the operative part of the Supplemental Rule 131 Affidavit, i.e. the source code itself, was sufficient to swear behind Guarraci et al.

On July 9, 2007, the Examiner mailed a nonFinal Action asserting a new ground of rejection, after Appellant filed his Appeal Brief, but Appellant maintains the Appeal.

V. Summary of Claimed Subject Matter

Support for the elements in the claims is indicated in plain brackets [ ].

Claim 1 recites a method for performing a remote power reset at a remote server through a network connection. [Page 5 lines 7-16] A power reset procedure is pinned to memory at a remote server. [Page 3 lines 7-12. Figure 4 step 410. Page 9 lines 9-20. Page 12 lines 16-22. Remote Process 140 and Memory 132 of Figure 1.] The power reset procedure is continuously run to listen for a call to initiate a power reset in response thereto. [Page 9 line 20 - Page 10 line 4.]

Claim 10 recites a remote server comprising a memory for storing program instructions. [Page 5 lines 7-16] A power reset procedure is pinned to the memory. [Page 3 lines 7-12. Figure 4 step 410. Page 9 lines 9-20. Page 12 lines 16-22. Remote Process 140 and Memory 132 of Figure 1.] The remote server also comprises a processor configured according to the program instructions for running the power reset procedure to listen for a call to initiate a power reset in response thereto. [Page 9 line 20 - Page 10 line 4.]

Claim 18 recites a remote server with means for storing program instructions. [Page 5 lines 7-16, Memory 132 of Figure 1.] A power reset procedure is pinned to a memory. [Page 3 lines 7-12. Figure 4 step 410. Page 9 lines 9-20. Page 12 lines 16-22. Remote Process 140 and Memory 132 of Figure 1.] There are means configured according to the program instructions for running the power reset procedure to listen for a call to initiate a power reset in response thereto. [Page 9 line 20 - Page 10 line 4.]

Claim 21 recites a program storage device readable by a computer. [Page 13 line 20 to Page 14 line 5.] The program storage device tangibly embodies one or more programs of instructions executable by the computer to perform a method for performing a remote power reset at a remote server through a network connection. [Figure 4 step 410. Page 9 lines 9-20. Page 12 lines 16-22. Network 116 of Figure 1] According to the method, a power reset procedure is pinned to memory at a remote server. [Page 3 lines 7-12. Figure 4 step 410. Page 9 lines 9-20. Page 12 lines 16-22. Remote Process 140 and Memory 132 of Figure 1.] Also, the power reset procedure is continuously run to listen for a call to initiate a power reset in response thereto. [Page 9 line 20 - Page 10 line 4.]

The structure, material or acts described in the specification plus equivalents for each means plus function and step plus function are identified in stylized brackets { }.

Claim 10. A remote server, comprising:

a memory for storing program instructions {Memory 132 of Figure 1}, a power reset procedure {Remote Process 140} being pinned to the memory {Page 9 lines 11-12}; and

a processor {Processor 210 of Figure 2} configured according to the program instructions for running the power reset procedure to listen for a call to initiate a power reset in response thereto {Page 9 lines 20 - 22.}.

Claim 18. A remote server, comprising:

means for storing program instructions {Memory 132 of Figure 1}, a power reset procedure {Remote Process 140} being pinned to a memory {Page 9 lines 11-12}; and

means configured according to the program instructions for running the power reset procedure to listen for a call to initiate a power reset in response thereto {Page 9 lines 20 - 22.}.

VI. Grounds of Rejection to be Reviewed on Appeal

Based on the nonFinal Office Action mailed on July 9, 2007, after Applicant filed his Appeal Brief, the grounds of rejection are as follows:

Claims 1-7, 10-15, 18 and 21 were rejected under 35 USC 103(e) based on Guarraci et al. (US Pub 2004/0267918) in view of Leung et al. (US Patent 6,697,033).

VII. Argument

A claim cannot be obvious under 35 USC 103 unless (a) there is a reason that a person of ordinary skill in the art would have combined the references, and (b) all the claim elements are taught or suggested by the prior art. See In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438, 1443 (Fed Cir. 1991) and KSR Int'l Co. v. Teleflex, Inc., No. 04-1350 (USSC 30 April 2007).

Rejection of Claims 1-7, 10-15, 18 and 21 under 35 USC 103 based on Guarraci et al. in view of Leung et al.

Claims 1-7, 10-15, 18 and 21 were rejected under 35 USC 103(e) based on Guarraci et al. (US Pub 2004/0267918) in view of Leung et al. (US Patent 6,697,033). Appellant respectfully traverses this rejection based on the following.

Explanation of Original Rule 131 Affidavit and

How it Swears Behind Guarraci et al.

Guaracci et al. was filed on June 30, 2003. Appellant's original Rule 131 Affidavit (seasonably filed and entered before Final Rejection) included copies of "res.c" source code listing, "rescl.c" source code listing and "dir.list.txt". The res.c program was implemented at the client computer to request the power reset of the remote server. The rescl.c program was implemented at the remote server to pin memory for the power reset function, wait for the request for power reset and then initiate the power reset of the remote server. The directory shows the last dates of update of "res.c" source code and "rescl.c" source code, to be in March 2003. As indicated by the original Rule 131 Affidavit (including the source code listings) and Appellant's Invention Disclosure submitted on May 7, 2003, Appellant conceived and reduced to practice his invention, as currently claimed, by March 2003 which is before the filing date of Guaracci et al. The Examiner objected to the source code listings in the original Rule 131 Affidavit because they were not clear enough to the Examiner as to the function implemented by the two source code programs. However, this does not diminish the effect of the source code programs for swearing behind Guarraci et al. **Source code is readily understood by someone of ordinary skill in the art, and therefore, meets the requirements for proof of conception and reduction to practice.** Moreover, the source code could readily be compiled into object code and executed, by a mere technician.

As a convenience to the Examiner, Appellant subsequently submitted a Supplemental Rule 131 Affidavit with the same "res.c" source code and "rescl.c" source code as in the original rule 131 Affidavit but with Appellant's newly created/added comments (in blue) next to key lines of the source codes to explain their meaning. (The Supplemental Rule 131 Affidavit is also enclosed for the convenience of the Board, with the newly created/added comments being underlined.) Appellant also enclosed another Affidavit swearing that Appellant's added comments were accurate. Regardless of whether the Supplemental Rule 131 Affidavit is considered, the following explanation applies to the original Rule 131 Affidavit which was entered. The last eight lines of the rescl.c source code, beginning with "if (getsockname ...",

implements the pinning of the power reset program to memory, and the looping of the power reset program to listen for a call to initiate the power reset program, as recited in claim 1. The ninth line from the end of the source code binds the socket to the TCP port to listen for a TCP/IP request packet to perform power reset, as recited in claim 2 and elsewhere. The step "reboot (RB_SOFTIPL)", in about the middle of the source code, is a system call to reboot as recited in claim 7. In the res.c source code, the step "rc=connect ..." about in the middle of the source code, allows another computer to establish a TCP socket connection with the remote computer which includes the power reset program. The step "fpringf(stderr, "attempt to reboot/n" six lines from the end, establishes the request to reboot to be sent to the remote computer. Therefore, Appellant has established conception and actual reduction to practice of the invention, as currently claimed, prior to the effective date of Guaracci et al. Consequently, Guaracci et al. is not an effective reference against the present patent application.

In the nonFinal Office Action mailed on July 9, 2007, the Examiner asserted that Appellant failed to reduce the invention to practice prior to the effective date of Guarraci et al. However, Applicant's Rule 131 Affidavit states "I conceived and reduced to practice the invention as claimed by March 2003." Also, Appellant submitted the source code and directory with the Rule 131 Affidavit.

Claims 1-7, 10-15, 18 and 21 were rejected under 35 USC 103 based on Guarraci et al. and Leung et al. Appellants traverse this rejection based on the following (in case the Rule 131 Affidavit is not found to be effective in swearing behind Guarraci et al).

Claim 1 recites the step of "pinning". "Pinning" is defined in the Background section of the present patent application as follows:

> "Pinning generally refers to an ability for pages to remain in main memory and not have to be swapped out, typically by a computer operating system. This enables memory pages to be maintained in real memory all the time. However, if a program/process is not pinned to memory (normally it is not), the program/process competes for memory resources with other

programs. However, as soon as a new resource is required, e.g., memory, the program will fail." Present Patent Application, Page 3 lines 7-12.

Thus, "pinning" a program to memory means that the program will remain in memory for execution, and not be swapped out to storage, even when memory is in short supply, and another program may need memory. Claim 1 recites that a **power reset procedure** is pinned to memory and continuously run to listen for a call to initiate a power reset in response thereto.

Guaracci et al. fail to disclose the key features of the present invention, i.e. pinning a **power reset procedure** to memory at a remote server, and **continuously running the power reset procedure to listen for a call to initiate a power reset in response thereto**. The pinning enables the power reset procedure to be operative despite a shortage of memory at the remote server that causes other critical functions to fail. The pinning of the power reset procedure and the continuous running of the power reset procedure to listen for a call allows power reset of the remote computer to correct problems with the remote computer, when there is insufficient memory at the remote computer for all programs to run. Guaracci et al. are concerned with something different, i.e. a communication channel between a controlling computer and remote computers; and remotely monitoring computer systems over an out-of-band communication channel when the in-band communication channel is unavailable. Guaracci et al. does not teach that a power reset procedure is pinned to memory, so that it is not outpaged when memory is short. Moreover, Guaracci et al. do not teach or suggest continuously running the power reset procedure to listen for a call to initiate a power reset in response thereto.

The Examiner cites Paragraph 0035 of Guaracci et al., "UPS 120 may provide basic remote management capabilities, such as the ability to cycle power or reset headless server 110". This just means to turn the electrical power to server 110 on and off, like throwing a power switch. This does not involve pinning a power reset procedure to memory and then remotely calling the power reset procedure, as recited in claim 1.

The other independent claims 10, 18 and 21 similarly distinguish over Guarraci et al.

As explained above, Guarraci et al. fail to disclose the pinning of a power reset procedure to memory and continuously running the power reset procedure to listen for a call to initiate a power reset in response thereto, as recited in claim 1. The Examiner now cites Leung et al. to purportedly fill the gap. Leung et al. teach

"The method of the present invention is implemented in a software routine, which is stored in the system memory 102 in a memory area 116. The software routine is a terminate and stay resident (TSR). The TSR's reside in memory at all times once they are loaded and can be instantly accessed from other programs. A TSR cannot be swapped out of memory by the computer system. The software routine of the present invention remains in the system memory area 116 of the system memory 102 and monitors the computer system for an interrupt, which occurs when display devices are hot swapped.

FIG. 2 is a flow chart depicting the method of the present invention. Initially in step 200, a run time flag is set to a first value which indicates that there has been no change of a display device. In step 201, it is determined if a new display device has been connected to the computer system. Such a detection, for example, can occur by monitoring the computer system for an interrupt. If there is no detected change of a display device then a determination is made as to whether a run time EDID is required in step 203. If no run time EDID is required, then the current EDID is read from the video BIOS 110 on the graphics adapter 104. Only at boot up of the computer system will no display device change be detected as well as no requirement for a run time EDID resulting in the step 205 of reading the EDID from the video BIOS 110. ..." Leung et al. Column 3 lines 19-44.

"The software routine of the present invention is stored in system memory and is a TSR that communicates with the ASIC. Thus, the software routine for a device change in the computer system detects the CPU interrupt and the software is thus invoked and communicates with the graphics adapter. Therefore, it analyzes the EDID and sets the parameters for the new device." Leung et al. Column 4 lines 11-17.

While Leung et al. teach a terminate and stay resident software routine, Leung et al. do not teach or suggest the pinning of a **power reset procedure** to memory and **continuously running the power reset procedure to listen for a call to initiate a power reset in response thereto**.

Moreover, Leung et al. teach away from the present invention because Leung et al. are concerned with connecting a new display device to a computer system **without shutting or rebooting the computer system**. "In general terms, the method and system connects a display device or other device to a computer system **during operation of the system**." Leung et al. Column 2 lines 22-24. "The present invention allows a computer system to **continue operation** while a first display device is disconnected from the system and a second display device is connected to the system." Leung et al. Column 2 lines 42-45.

Therefore, Guarraci et al in combination with Leung et al. do not teach or suggest the present invention as recited in claim 1, and in fact, teach away from the present invention. Neither teaches the pinning of a **power reset procedure** to memory and **continuously running the power reset procedure to listen for a call to initiate a power reset in response thereto**.

Appellant acknowledges that pinning other types of programs to memory is prior art. This is stated in the Background section of the present patent application. However, to pin a power reset program to memory and continuously run the power reset procedure to listen for a call to initiate a power reset in response thereto, as recited in claims 1, 10, 18 and 21 is new. It would not have been obvious to pin a power reset procedure to memory and continuously run the power reset procedure to listen for a call to initiate a power reset in response thereto, because this was not taught or suggested by the prior art, and Leung et al. teach away from this. Also, this involves two discrete steps in combination to solve a problem with shortage of memory. The pinning of the remote power reset procedure to memory ensures that the power reset procedure will be in memory and callable despite the shortage of memory. Continuously running the power reset procedure to listen for a call to initiate a power reset in response thereto avoids reliance on another "intervening" program (in the computer to be reset) to invoke the power reset procedure upon receipt of a remote power reset command. This other intervening program might be outpaged, and therefore not available when memory was short. So, the

present invention advantageously does not include or use such an intervening program (in the computer to be reset). Therefore, claim 1 recites two discrete steps, in combination, that ensure operation of a power reset procedure during shortage of memory.

The other independent 10, 18 and 21 similarly distinguish over Guarraci et al. in combination with Leung et al.

Therefore, the rejection of claims 1-7, 10-15, 18 and 21 under 35 USC 103 based on Guarraci et al. in view of Leung et al. should be reversed.

Rejection of Claims 2-6, and 11-14 under 35 USC 103
based on Guarraci et al. and Leung et al.

Dependent claims 2-6, and 11-14 recite that the call to the pinned, power reset procedure is made via a network. Neither Guarraci et al. nor Leung et al. remotely call a pinned, power reset procedure or suggest such a remote call.

Based on the foregoing, Appellant requests that the Final Rejection of claims 1-7, 10-15, 18 and 21 be reversed.

Respectfully submitted,

Dated: 07/23/07
Telephone: 607-429-4368
Fax No.: 607-429-4119

/Arthur J. Samodovitz/
Arthur J. Samodovitz
Reg. No. 31,297

VIII. CLAIMS INVOLVED IN APPEAL

1. A method for performing a remote power reset at a remote server through a network connection, comprising:

pinning a power reset procedure to memory at a remote server; and

continuously running the power reset procedure to listen for a call to initiate a power reset in response thereto.

2. The method of claim 1, wherein the listening for a call further comprises listening for a Request TCP/IP packet to initiate the power reset.

3. The method of claim 2, wherein the listening for a call further comprises listening for a call via a network connection.

4. The method of claim 1, wherein the listening for a call further comprises listening for a call via a network connection.

5. The method of claim 1, wherein the listening for a call further comprises listening to a predetermined TCP/IP port for a Request TCP/IP packet specifying the power reset procedure.

6. The method of claim 5 further comprising receiving at the predetermined TCP/IP port the Request TCP/IP packet and initiating the power reset procedure pinned in the memory of the remote server in response to receipt of the Request TCP/IP packet.

7. The method of claim 6, wherein the initiating the power reset further comprises performing a system call to reboot or power off the remote server.

8. (Allowable). The method of claim 6, wherein the remote server hangs as result of running out of virtual memory, and wherein the initiating the power reset further comprises unhanging the remote server using the power reset procedure.

10. A remote server, comprising:

a memory for storing program instructions, a power reset procedure being pinned to the memory; and

a processor configured according to the program instructions for running the power reset procedure to listen for a call to initiate a power reset in response thereto.

11. The remote server of claim 10, wherein the call comprises a Request TCP/IP packet for initiating the power reset.

12. The remote server of claim 10, wherein the processor listens for the call via a network connection.

13. The remote server of claim 10, wherein the processor listens for a call by listening to a predetermined TCP/IP port for a Request TCP/IP packet specifying the power reset procedure.

14. The remote server of claim 13, wherein the processor receives the Request TCP/IP packet from predetermined TCP/IP port and initiates the power reset procedure pinned in the memory in response to the Request TCP/IP packet.

15. The remote server of claim 14, wherein the processor initiates the power reset by performing a system call to reboot or power off the remote server.

18. A remote server, comprising:

means for storing program instructions, a power reset procedure being pinned to a memory; and

means configured according to the program instructions for running the power reset procedure to listen for a call to initiate a power reset in response thereto.

21. A program storage device readable by a computer, the program storage device tangibly embodying one or more programs of instructions executable by the computer to perform a method for performing a remote power reset at a remote server through a network connection, the method comprising:

pinning a power reset procedure to memory at a remote server; and

continuously running the power reset procedure to listen for a call to initiate a power reset in response thereto.

IX Evidence Appendix

A copy of the original Rule 131 Affidavit which was submitted before Final Rejection and entered is enclosed. A copy of the Supplemental Rule 131 Affidavit which was submitted after Final rejection and not entered, is also enclosed for the convenience of the Board in understanding the source code contained in the original Rule 131 Affidavit. The Supplemental Rule 131 Affidavit which is enclosed has the same comments that were created at the time of filing the Supplemental Rule 131 Affidavit, but they are now underlined to standout better.

X. Related Proceedings Appendix

There are no related Appeals or other proceedings, and therefore no copies of decisions to include.